

Remarks

This application has been amended in a manner that is believed to place it in condition for allowance.

Claims 32-38, 41-46, and 50-53 are pending in the application.

Claims 32-38, 41-46 and 50-53 have been amended to address formal matters. In particular, claim 32 has been amended to address a formal matter. V of formula (I) can be a carbohydrate residue. This carbohydrate residue can be a monosaccharide residue, an oligosaccharide residue or a polysaccharide residue. Support for the changes may be found in claim 33. The alternative iii) in claim 33 has been cancelled since this feature has been introduced into claim 32.

Claim 42 has been amended in similar manner to claim 32.

Claim 51 is now directed to the oral administration of a composition.

Claim 53 has been amended to address a formal matter.

Claims 1-31, 39-40, and 47-49 have been canceled without prejudice or disclaimer.

Claim 53 has been amended so that it is dependent on claim 52. Applicants respectfully request that the objection be withdrawn.

Claims 32-53 are rejected under 35 USC 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter. This rejection is traversed.

Applicants respectfully submit that the claimed are definite to one skilled in the art. For the convenience of the Examiner, Applicants attach an appendix that provides an overview as to the different possibilities for the radical V in formula I as set forth in claim 32. The different possibilities are as follows:

- (i) In case the residue V represents OH then n can have only one meaning, i.e. n=1.
- (ii) In addition the radical V can have two other meanings, i.e. b) a carbohydrate residue or c) a connecting point on a carrier T. Depending on the size of the index n, the corresponding numbers of compounds represent by the general formula II are attached to one and the same carrier T. In other words, if n=1, the carrier T carries only one residue of the general formula II. When n=2, the carrier T is attached to two residues of the general formula II. The numbers of residues attached to one and the same carrier increases with an increase of the index n. A similar situation is given in the situations where V represents a carbohydrate residue. In this regard, the claims may be broad in that they contain alternative recitations, but are certainly definite to one skilled in the art and do not reflect a broad range within a narrow range. The same stands true for claim 33.

In view of the above, Applicants respectfully submit that the claimed invention is definite to one skilled in the art.

Claim 42 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3-7 and 12-13 of copending Application No. 10/148,193. This rejection is traversed.

Applicants respectfully submit that the rejection is improper as a matter of law as the Patent Office fails to provide any evidence in support of the position that the claims of the above-identified application are obvious in view of United States Patent Application No. 10/148,193. Claims 1, 3-7 and 12-13 of United States Patent Application No. 10/148,193 are directed to an oligosaccharide mixture. The oligosaccharides mixture makes contains oligosaccharides obtained from animal milk and recite a specific ratio of neutral oligosaccharides to acidic oligosaccharides. As, there is no evidence to suggest that this mixture would render obvious any of the present claims, Applicants respectfully request that the rejection be withdrawn.

Claim 42 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,576,251. This rejection is traversed.

United States Patent No. 6, 576,251 ("251) is directed to a food, dietetic or pharmaceutical composition comprising carbohydrate mixtures, these mixtures are made up of saccharides having a different chain length. In addition, the saccharides used in the '251 patent are present in the mixture in a certain ratio. However, the ratio is not recited with the present claims.

Applicants also respectfully note that the carbohydrate mixture of the "251-patent" contains a minimum amount of fucose in free form and/or in a form bound

to an oligosaccharide and/or a polysaccharide. The term "bound" refers to the fucose unit.

However, once again, the Patent Office fails to provide any evidence in support of its position. In this regard, it cannot be said that the claims of the above-identified application are obvious in view of the '251 patent.

In view of the differences noted above and lack of any evidence to support of the assertions of the Official Action, Applicants respectfully submit that the rejection is improper as a matter of law and request that it be withdrawn.

Claims 32-35, 37-40 and 52-53 are rejected under 35 USC 102(b) as allegedly being anticipated by losa (BE 1006598). This rejection is traversed.

The losa relates to the treatment of certain eye diseases (see page 8, starting at line 23). In addition, losa is concerned about virus infections (i.e. genital herpes). As can be taken from the last paragraph of page 9 of losa, the composition employed according to losa is administered parenterally. In contrast thereto the carbohydrates of the formula I as used according to the present invention are administered orally and therefore not parenterally but enterally administered.

Thus, losa cannot anticipate the claimed invention.

Claims 42-45, 47 and 50 are rejected under 35 USC 102(b) as allegedly being anticipated by GILBERT (WO 00/46379).

GILBERT et al provide prokaryotic glycosyltransferases for the production of gangliosides and ganglioside mimics. GILBERT relates to the use of

sialyltransferase to make sialated oligosaccharides (see abstract). The document explains that depending on the structure of the gangliosides, the gangliosides can have different effects

GILBERT does not disclose or suggest treating an infection as recited in the claimed invention. Rather, it is stated that gangliosides can be used to mimic the outer shell of LPS. In Part E, GILBERT states that: "The oligosaccharide of the invention can be used as an immunogen for the production of monoclonal or polyclonal antibodies specifically reactive with the compounds of the invention".

Moreover, the carbohydrates as used according to the present invention do not serve the purpose of producing antibodies. They are rather compounds used for medicinal purposes. A composition for producing an antibody is not a means for the treatment of infections of human beings and animals. According to the teaching of the GILBERT reference it is necessary to first prepare the antibodies by using the oligosaccharides there described. Said antibodies can then be used for medicinal purposes.

Furthermore, Applicants respectfully submit that GILBERT does not disclose a compound containing C as recited in claims 14-28. In the claims 14-28 C is HexNac, Hex, or absent, not glucocyl as shown in compound GT1a of Figure 4. As to claims 29-31, applicants respectfully submit that the GT1a compound fails to disclose or suggest V. Rather, GILBERT teaches that the molecule a fluorescent molecule is present.

Thus, GILBERT fails to disclose or suggest the claimed invention.

Claims 34, 36, 41 and 51-52 are rejected under 35 USC 103(a) as allegedly being unpatentable over losa in view of GILBERT. These rejections are traversed.

losa and GILBERT fail to disclose the claimed invention for the reasons noted above.

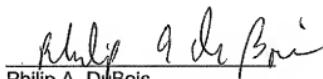
losa clearly teaches an parenteral administration thereby excluding an enteral administration. The mode of action of the carbohydrates for treating the diseases as illustrated by the losa is completely distinct from the mode of action as taught by the present invention. Consequently, the teaching of the present invention would not have been obvious in view of the combination of losa and GILBERT.

Claims 48-49 are rejected under 35 USC 103(a) as allegedly being unpatentable over GILBERT et al. in view of MULLER et al. (Angew. Chem. Int'l. Ed. 1993, 32, 477-502). This rejection is traversed.

Applicants respectfully submit that GILBERT fails to disclose or suggest the claimed invention for the reasons noted above. Applicants further submit that Muller fails to remedy the deficiencies of GILBERT for reference purposes. MULLER does not teach a carbohydrate as suggested by GILBERT. Rather, MULLER relates to a polyhydroxybutanoic acid, as acknowledged by the Official Action. Thus, MULLER cannot remedy the deficiencies of GILBERT and the proposed combination of MULLER in view of GILBERT fails to disclose or suggest the claimed invention.

In view of the above, applicants respectfully request rejection be withdrawn. Applicants believe that the present application is in condition for allowance at the time for the next official action.

Respectfully submitted,
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April 2, 2010